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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/413,348 | 10/06/1999 | NORIHISA FUKUTOMI | Q56091 | 1912 |

7590 08/01/2003

SUGHRUE MION ZINN MACPEAK & SEAS
2100 PENNSYLVANIA AVENUE NW
WASHINGTON, DC 20037

EXAMINER

KIM, CHRISTOPHER S

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| 3752 | 34 |

DATE MAILED: 08/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|-----------------|-----------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/413,348 | FUKUTOMI ET AL. |
| Examiner | Art Unit | |
| Christopher S. Kim | 3752 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 13 June 2003.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 2-9 is/are pending in the application.

4a) Of the above claim(s) 3-5 is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 2 and 6-9 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on 08 August 2000 is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____ .

2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ . 6) Other: _____ .

DETAILED ACTION

Response to Amendment

1. Amendment filed June 13, 2003 is acknowledged.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Drawings

3. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on August 8, 2000 have been approved. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites "a coil" in lines 12-13. It appears to be a double inclusion of the "solenoid" and/or "coil" recited in line 2 and 5, respectively.

Claim 2 recites "said coil" in line 13. It is uncertain whether it is in reference to the "coil" recited in line 5 or the "coil" recited in line 13.

Claim Rejections - 35 USC § 102

5. Claims 2, 6-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Reiter (6,224,002).

Reiter discloses a fuel injection valve comprising: a needle valve 18; an armature 21; a solenoid/coil 1; an elastic member 35; a sleeve 33, 34; a core 2; a valve holder 13, 16.

6. Claims 6-9 (as best understood) are rejected under 35 U.S.C. 102(b) as being anticipated by Asano (5,188,297).

Asano discloses a fuel injection valve comprising: a needle valve 31; an armature 32; a solenoid 44; a sleeve 22; a buffer portion/means for damping 39 being an elastic member (O-ring); a fuel passage 22f; an end face (down stream side of 32); a nozzle opening 27; a core 36. O-ring 39 inherently functions as a buffer portion.

Response to Arguments

7. Applicant's arguments filed June 13, 2003 have been fully considered but they are not persuasive.

In response to applicant's argument that Reiter's elastic member 35 does not extend in a perpendicular direction away from the sleeve 33, the O-ring has a dimension, for example, the horizontal diameter, which extends from the sleeve 33 toward the core 2.

In response to applicant's argument that Reiter does not disclose a buffer portion, the O-ring inherently functions as a buffer portion. Applicant discloses, in the specification on page 7, that Applicant's buffer portion is a rubber ring.

In response to applicant's argument that Reiter does not disclose the buffer portion located between the sleeve and the core, Reiter discloses a buffer portion 35 between sleeve 33, 34 and core 2.

In response to applicant's argument that Asano's elastic member 39 does not extend in a perpendicular direction away from the sleeve 22, the O-ring has a dimension, for example, the horizontal diameter, which extends from the sleeve 22 toward the core 36.

In response to applicant's argument that Asano does not disclose a buffer portion, the O-ring inherently functions as a buffer portion. Applicant discloses, in the specification on page 7, that Applicant's buffer portion is a rubber ring.

In response to applicant's argument that Asano does not disclose the buffer portion located between the sleeve and the core, Reiter discloses a buffer portion 39 between sleeve 22 and core 36.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. Kim whose telephone number is (703) 308-8336. The examiner can normally be reached on Monday - Thursday, 6:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Y. Mar can be reached on (703) 308-2087. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

Art Unit: 3752

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.



Christopher S. Kim
Primary Examiner
Art Unit 3752

CK

July 31, 2003